

Highlights

- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Net. Currently used by the IBM research team.
- Engineered enterprise-level Learning Management System in which lead & mentored team of 5 engineers.
- Designed best-in-class UI & UX interfaces that haven been applauded on Dribbble.
- Founded a Startup at Qualcomm Labs incubator for which was selected in the top 10 startups out of thousands of applicants.
- Won the Gold medal for my country in Football at the South Asian Games 2014.
- Submitted a research paper in IEEE on Federated Learning - Privacy Enhanced Collaborative Machine Learning.
- Consulted & solved the problems of several local companies providing software & hardware based solutions.

Experience

A D Patel Institute of Technology | Software Developer

August 2016 - September 2018

Learning Management Platform • August 2017 - September 2018

- Envisioned, Designed & Engineered suite of applications that solved the problems in existing paper-based solution of Scheduling, Information sharing, Evaluations, Asset Management, etc.
 - Lead & mentored team of 5 engineers, We engineered cross-platform backend services which are architected to scale even on consumer hardware.
 - Took it as a personal challenge to design best-in-class UI & UX interface. App designs have been applauded in the worldwide design community - Dribbble. <http://goo.gl/G2KiE2>
 - In-house Designed & 3D printed biometric fingerprint devices that facilitate classroom authentication centrally.
 - Deployed an in-house private Cloud cluster through OpenStack providing 250% more computing power while being 40% cheaper than the previous solution.
- Tech Stack: React, React Native, Electron | NodeJS, Golang | MemSQL, Aerospike.

ADIT Alumni Hub • <http://alumni.adit.ac.in> • August 2016 - March 2018

- Designed & Developed a social platform from scratch to allow Alumni's to reconnect with each other, discover other alumni's in same region and profession, share jobs & events.
- Built ETL setup for highly inconsistent student data from 10+ data sources, implemented Data Mining techniques to integrate data of more than 17000 students into a single database.

Tech Stack: React & LEMP Stack

Smarq Technologies | Founded a Smart Home startup Nov 2015 - May 2016

- Envisioned & Designed a tightly-knit ecosystem of smart sensors capable of various automation sequences within a home based on local location of user.
- USP: Smarq Sense - A smart system that generates ever-adapting automation sequences for each user.

Skills

FrontEnd

JavaScript - React, React-Native, Electron, JQuery, WebAssembly
Android, HTML5, CSS.

BackEnd

NodeJS, PHP, Python, Java, C++.
Database: SQL : MySQL, Postgre.
NoSQL : MongoDB, Redis, Aerospike

Tools & Libraries

Compute & Networking: OpenStack distributed cluster, PfSense.
DevOps: GCP, AWS, Docker, Kubernetes, CI/CD
GraphQL, Jupyter Notebook.

Design

Sketch, Illustrator, Autodesk Inventor, Keyshot, Principle, Figma, Photoshop.

Achievements

Won Qualcomm's Design in India Challenge 2016 - Phase 1 for my startup: Smarq Technologies

Awarded Incubation & support from Qualcomm Engineers.
November 2015 - May 2016

Winners at Smart Gujarat Hackathon 2018

For Project of Ministry of Tribal Development - System that prevents duplication of beneficiaries availed by welfare schemes.
Feb 2018

Finalists at Smart India Hackathon 2017

Designed & Engineered portable system for remote monitoring Water Quality.
Feb 2017

International Level Football

Won South-Asian Games - Football Championship Title representing India.
April 2014

Purva Couture | Software Developer April 2015 - December 2015

Designer Fashion Studio

- Single-handedly developed a Business Operations system that manages from Sales to Production to Deliveries handling more than 500 clients & revenue of 8cr.

BAPS Vadodara | Consultant & Systems Engineer Sep 2017 - Jan 2018

- Deployed an OpenCV based solution to accurately count people in an open event provide a real-time count to kitchen staff, costing 3.7x less than the commercially available solution.
- Developed a custom tool that detects an anomaly in remote Engraving job and notifies the manager on mobile. Solved a problem that would remain undetected as long as 4 days.

Projects

Slack-first HR Solution Feb 2020 - May 2020

- Developed a Slack plugin application that helps combat abusive conduct at a workplace backed by a Multi-Label classifier using Neural Net.
- Currently used by IBM Research Team.

Reverse proxy to increase downlink bandwidth Aug 2019 - Sep 2019

- Developing a reverse proxy that substantially minimizes the effect of Bandwidth Delay Product on TCP Throughput by buffering the file in a circular queue on multiple connections.
- Preliminarily achieved 8x improvement in streaming on intercontinental bandwidth with BBR congestion control.

Federated Learning - Privacy Enhanced Collaborative Machine Learning

Jan 2019 - Aug 2019

- Developed Federated Averaging Algorithm optimized for Large-Scale LSTM-CNN when the input consists of large number of small-sized updates in Homomorphic Encryption.
- Submitted a research paper in IEEE Journal

Finalists at Robocon Asia 2017 - MIT, Pune Dec 2016 - Mar 2017

- Collaborated in a team of 20 members from diverse domains and applied problem-solving skills combining areas of multiple domains.
- Developed custom firmware & Java application for a fully autonomous robot.

3D Indoor GPS June 2017

- Implemented a 3D Indoor GPS solution using UWB to automate lights based on location context.
- Achieved accuracy of avg. 27cm considering wall interference.

Education

SJSU - San José State University

Pursuing Masters in Computer Science

Dual Specialization: Enterprise Software Technologies & Data Science

Jan 2020 - Dec 2021

Gujarat Technological University

Bachelor of Engineering - Information Technology

Graduated First Class with distinction

Jul 2015 - June 2019